Part I: Report Summary

Wisconsin's overall water quality remains good. While the number of diffuse sources of pollution continues to grow with increases in development statewide, strategies and programs to stem problems with reduced infiltration, urban and rural runoff, and degraded groundwater quality are also moving forward. These programs include statewide performance measures for nonpoint sources of pollution, identification of source water protection areas, and a number of public-private waterbody restoration projects.

Additionally, Wisconsin is improving its tracking of water quality condition through new data management applications that take advantage of new communication technology. These data systems include a river and lake monitoring and management database and enhancements to the state's waterbody assessment database. In time, these data will be linked to spatial representations, or maps, of the state's water features for point-and-click information at the waterbody level.

This report describes the how the state's 57,698 stream miles faired during the Year 2002 assessment period. While 24,422 stream miles were "assessed" — 9,199 miles were monitored and 15,222 miles were evaluated — all 57,698 stream miles are listed as impaired for one or more beneficial uses due to a statewide general fish consumption advisory for mercury. In addition, habitat alterations other than flow alterations negatively affect 8,459 stream miles; siltation or sedimentation affect 6,458 stream miles; and nutrients affect 2,717 stream miles. Following these key causes of problems are the presence of turbid waters, low dissolved oxygen readings and the presence of pathogens (bacteria).

Sources of these problems include atmospheric deposition (57,698 miles), agriculture (5,620 miles), hydrologic modifications (4,223 miles), and non-hydrologic-based habitat modifications (3,583 miles), and stream bank pasturing (2,736 miles). These stream figures reflect historic data (gathered prior to 2000-02), as well as assessments made in 2002. Approximately 50 percent of the available 2000-02 assessments were entered into the watershed database to calculate these numbers. Thus, key cause and source categories may change when the remaining updated information is entered into the database.

Wisconsin lakes have been more comprehensively monitored than streams, according to the assessment database. Over 792,000 lake acres have been assessed, with 758,782 monitored and 33,519 miles evaluated. As with rivers, due to the presence of a general fish consumption advisory for mercury, all 792,000 lake acres are listed as impaired for one or more beneficial uses, with mercury via atmospheric deposition the chief cause/stressor to lakes. Other causes of problems include excess nutrients, siltation, organic enrichment, noxious aquatic plants, and the presence of exotic species. Key source categories include agriculture, construction activities, hydrologic modifications (including dam construction and flow modification), and habitat modification other than hydrologic modification related.

Wisconsin plans to achieve comprehensive coverage of its waters through a variety of methods, including the implementation of a baseline monitoring program utilizing random stratified sampling techniques, as well as better tracking and assessment of all waterbodies. These improvements will allow Wisconsin to better understand and communicate general trends or changes in water quality over time.

Issues of special concern to the state include eutrophication, aquatic nuisance species, water quantity issues, riparian development, habitat protection and restoration, the presence of mercury and the need for improved monitoring and data management. Water management techniques being used include (just a sample):

- management of water resources through the basin management (or watershed management) approach,
- development of integrated resource management plans,
- development of biological indicators or biocriteria for wetlands,
- development and implementation of performance standards for nonpoint sources of pollution, and
- development of public/private partnerships in the area of pollution prevention, innovation, and resource monitoring.